

**Notice of Allowability**

Application No.

10/748,357

Examiner

Anne V. Lai

Applicant(s)

NATHAN ET AL.

Art Unit

2636

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to December 30, 2003.
2. ☒ The allowed claim(s) is/are 1-10.
3. ☒ The drawings filed on 23 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with attorney Gerald E. McGlynn, III on June 22, 2005.

In claims 1 and 10 last sentence; change "senor" to – sensor --.

In paragraph [0042], page 18, line 4; change "Figure 4" to – Figure 5 --.

In paragraph [0043], page 18, line 9; change "Figure 4" to – Figure 5 --.

### ***Allowable Subject Matter***

2. The following is an examiner's statement of reasons for allowance:

Claims 1-10 are allowed over prior art of record because the cited references either alone or combined do not disclose the claimed invention:

a) A method of tuning the output of a sensor array for a vehicle seat occupancy sensing system that is used with a neural net for occupancy classification, said method including the steps of:

pressing a series of seat cushion body pressure distribution forms in a series of predetermined seating positions into a particular vehicle seat to produce a series of representative sensor response patterns from the sensor array;

comparing each sensor response pattern through the neural net to determine if any of the sensor response patterns are indistinguishable from one another;

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determining which sensors were deflected and the amount of deflection in those sensors for the indistinguishable sensor response patterns;

adjusting the biasing of said sensors to cause said indistinguishable patterns to diverge and be distinguishable by the neural net; and

repeating the above steps until the sensor response patterns are distinguishable from one another.

b) A method of tuning the alignment of a sensor array for a vehicle seat occupancy sensing system that is used with a neural net for occupancy classification, said method including the steps of:

locating a plurality of sensors in the form of an array so as to have a differing number of sensors activated by each of a series of different predetermined seat cushion body pressure distribution forms when placed in the particular vehicle seat in a normal seating position;

pressing the series of different seat cushion body pressure distribution forms in a predetermined series of varied seating positions into the particular vehicle seat to produce a series of representative sensor response patterns from the sensor array;

comparing said sensor response patterns to determine if the output of any of the sensors can be categorized as one of a group that includes, never deflected regardless of occupant classification and seating position used, always at same deflection regardless of occupant classification and seating position used, and always at same deflection as an adjacent sensor;

modifying the location of a sensor in the array if the output of the sensor can be categorized as one in the above defined group so that its deflection varies for at least one seating position in at least one occupant classification; and

repeating the above steps until none of the sensors can be defined as belonging to one of the above categories.

The claimed limitations show methods of improvement.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Wallace** discloses vehicle occupant classification method. [US. 6,609,054]

**Eagle et al** disclose method for demonstrating reliability of occupant classification systems. [US. 6,771,175]

**Mattes et al** disclose calibrating a sensor. [US. 2004/0154375]

**Wilssens** discloses measuring pressure distribution generated by a three-dimensional object. [US. 6,505,522]


**Cundari et al** disclose calibrating pressure sensors. [US. 5,916,180]

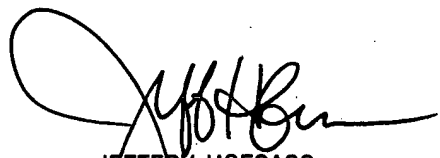
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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne V. Lai whose telephone number is 571-272-2974. The examiner can normally be reached on 8:00 am to 5:30 pm, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass Jeffery can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
A. V. Lai  
June 22, 2005

  
JEFFERY HOFSSASS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600